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10/661,487	09/15/2003	Robert Leon Wallace	HAR65 023	9227

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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>31 October 2007</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-5,7-11, 14-19, 23 and 24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-5,7-11,14-19,23 and 24* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

10/31/07 has been entered.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-5, 11, 16-18 and 24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Molne (US 5,999,811) in view of Farber (US 6,631,261) and further in

view of Leivo et al (US 6,782,080).

        Regarding claim 1, Molne discloses multimode/multihyperband mobile stations

(see column 7, lines 40-64), which reads on the claimed, "software defined radio

comprising: a plurality of communication schemes." A preferred roaming selection list is

provided in the SIM of each mobile station. The preferred roaming selection list

specifies the selection sequence for the mobile station as it roams throughout various

geographic areas and may include, for example, AMPS and PCS1900 modes (see

column 7, lines 40-64 and figure 2), which reads on the claimed, "configuration system

for selectively enabling one of the plurality of communication schemes comprising a

processor, a smartcard reader and a memory; wherein a one of the plurality of layered

communication schemes is selected and enabled by the processor based on

configuration information from a user's smartcard," wherein the preferred roaming

selection list is used to select a preferred system (see e.g. column 5, lines 4-40).

Molne fails to disclose wherein said configuration information includes at least a

security authorization.

In a similar field of endeavor, Farber discloses the use of a smart card in

authorization (see column 5, lines 55-64), which reads on the claimed, "wherein said

information includes at least a security authorization."

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to modify Molne with Farber to include the above use of a smartcard for

authorization in order to check to see if the mobile station is authorized for a service as

suggested by Farber (see column 5, lines 55-64).

The combination of Molne and Farber does not specifically disclose the selection

and enabling of the communication scheme is a function of the security status of the

user.

Leivo teaches the selection and enabling of the communication scheme is a

function of the security status of the user (see column 8, line 57 to column 9, line 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to provide the teaching of Leivo into the system of Molne

and Farber in order to provide a method for real-time authentication or authorization of a

user of a secured system is based on using two authentication channels an

authentication device (see Leivo, Abstract).

Regarding claim 2, the combination of Molne, Farber and Leivo discloses the

different modes may include AMPS and PCS1900 (see Molne, column 7, lines 40-64),

which reads on the claimed, "the plurality of communication schemes includes a

plurality of communication protocols."

Regarding claim 3, the combination of Molne, Farber and Leivo discloses any

combination of standards, such as GSM, DSC1800, PCS1900, AMPS, D-AMPS, NMT

and ETACS can be made and provided with a preferred roaming selection list (see

Molne, column 9, lines 24-35), which reads on the claimed, "the plurality of

communication schemes include a plurality of modulation/demodulation techniques."

Regarding claim 4, the combination of Molne, Farber and Leivo discloses any

combination of standards, such as GSM, DSC1800, PCS1900, AMPS, D-AMPS, NMT

and ETACS can be made and provided with a preferred roaming selection list (see

Molne, column 9, lines 24-35), which reads on the claimed, "the plurality of

communication schemes include a plurality of coding/decoding techniques."

Regarding claim 5, the combination of Molne, Farber and Leivo discloses the

preferred roaming selection list may include a mode bit or bits that identify the mode of

communication (see Molne, column 7, lines 40-64), which reads on the claimed, "the information retrieved form the smart card comprises a communication scheme."

Regarding claim 11, Molne discloses multimode/multihyperband mobile stations (see column 7, lines 40-64), which reads on the claimed, "in a software defined radio comprising layered communication information and plural communication protocols, a method of configuring the SDR." A preferred roaming selection list is provided in the SIM of each mobile station. The preferred roaming selection list specifies the selection sequence for the mobile station as it roams throughout various geographic areas and may include, for example, AMPS and PCS1900 modes (see column 7, lines 40-64 and figure 2), which reads on the claimed, "providing a smartcard containing configuration information; retrieving the configuration information from the smartcard, validating access authorization from the configuration information, configuring the SDR based on the configuration information."

Molne fails to disclose wherein said configuration information includes at least a security authorization.

In a similar field of endeavor, Farber discloses the use of a smart card in authorization (see column 5, lines 55-64), which reads on the claimed, "wherein said information includes at least a security authorization."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Molne with Farber to include the above use of a smartcard for authorization in order to check to see if the mobile station is authorized for a service as suggested by Farber (see column 5, lines 55-64).

The combination of Molne and Farber does not specifically disclose selecting the layered communication information and plural communication protocols as a function of a user's access authorization.

Leivo teaches selecting the layered communication information and plural communication protocols as a function of a user's access authorization (see column 8, line 57 to column 9, line 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Leivo into the system of Molne and Farber in order to provide a method for real-time authentication or authorization of a user of a secured system is based on using two authentication channels an authentication device (see Leivo, Abstract).

Regarding claim 16, Molne discloses multimode/multihyperband mobile stations (see column 7, lines 40-64), which reads on the claimed, "in a software defined radio comprising multiple link-layered communication protocols." A preferred roaming selection list is provided in the SIM of each mobile station. The preferred roaming selection list specifies the selection sequence for the mobile station as it roams throughout various geographic areas and may include, for example, AMPS and PCS1900 modes (see column 7, lines 40-64 and figure 2), which reads on the claimed, "method for configuring the SDR, the improvement comprising retrieving configuration instructions from a smartcard containing a specific configuration."

Molne fails to disclose wherein said configuration information includes at least a security authorization.

In a similar field of endeavor, Farber discloses the use of a smart card in authorization (see column 5, lines 55-64), which reads on the claimed, "wherein said configuration information includes at least a security authorization."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Molne with Farber to include the above use of a smartcard for authorization in order to check to see if the mobile station is authorized for a service as suggested by Farber (see column 5, lines 55-64).

The combination of Molne and Farber does not specifically disclose selecting multiple link-layered communication protocols as a function of a user's security authorization.

Leivo teaches selecting multiple link-layered communication protocols as a function of a user's security authorization (see column 8, line 57 to column 9, line 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Leivo into the system of Molne and Farber in order to provide a method for real-time authentication or authorization of a user of a secured system is based on using two authentication channels an authentication device (see Leivo, Abstract).

Regarding claim 17, the combination of Molne and Farber discloses any combination of standards, such as GSM, DSC1800, PCS1900, AMPS, D-AMPS, NMT and ETACS can be made and provided with a preferred roaming selection list (see column 9, lines 24-35), which reads on the claimed, "the specific configuration includes, modulation/demodulation type, digital processing and operational protocols."

Regarding claim 18, the combination of Molne and Farber discloses any combination of standards, such as GSM, DSC1800, PCS1900, AMPS, D-AMPS, NMT and ETACS can be made and provided with a preferred roaming selection list (see Molne column 9, lines 24-35), which reads on the claimed, "the specific configuration is selected from the group consisting of AMSSB, FM, PSK, QPSK, QAM, FSK, TDMA, CDMA, FDMA, AMPS, and GMS."

Regarding claim 24, Molne discloses multimode/multihyperband mobile stations (see column 7, lines 40-64), which reads on the claimed, "method for configuring a radio with software for communicating in a wireless environment." A preferred roaming selection list is provided in the SIM of each mobile station. The preferred roaming selection list specifies the selection sequence for the mobile station as it roams throughout various geographic areas and may include, for example, AMPS and PCS1900 modes (see column 7, lines 40-64 and figure 2), which reads on the claimed, "receiving configuration information from a smart card in communication with the radio; configuring the radio in accordance with the configuration information and verifying current validation of the smart card from the configuration information, said configuration information allowing the radio to communicate in the wireless environment."

In a similar field of endeavor, Farber discloses the use of a smart card in authorization (see column 5, lines 55-64), which reads on the claimed, "wherein said information includes at least a verification authorization."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Molne with Farber to include the above use of a smartcard for

authorization in order to check to see if the mobile station is authorized for a service as suggested by Farber (see column 5, lines 55-64).

The combination of Molne and Farber does not specifically disclose the configuration information includes security authorization and mission requirements of a user.

Leivo teaches the configuration information includes security authorization and mission requirements of a user on (see column 8, line 57 to column 9, line 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Leivo into the system of Molne and Farber in order to provide a method for real-time authentication or authorization of a user of a secured system is based on using two authentication channels an authentication device (see Leivo, Abstract).

4.   Claims 7-10, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molne (US 5,999,811) in view of Farber (US 6,631,261) and further in view of Leivo et al (US 6,782,080) and Ting et al (US 2003/0050055A1).

Regarding claim 7, the combination of Molne, Farber and Leivo fails to disclose a programmable A/D converter or a programmable D/A converter.

In a similar field of endeavor, Ting et al disclose the use of a programmable front-end that includes a A/D converter and a D/A converter (see paragraph 39), which reads on the claimed, "programmable A/D converter or a programmable D/A converter."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Molne, Farber and Leivo with Ting et al to include the above programmable front-end in order to implement multiple wireless communication standards, services and applications as suggested by Ting et al (see paragraph 36).

Regarding claim 8, the combination of Molne, Farber and Leivo fails to disclose a programmable digital signal processor.

In a similar field of endeavor, Ting et al disclose a re-programmable kernel is a software task executed on a DSP (see paragraph 42), which reads on the claimed, "programmable digital signal processor.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Molne, Farber and Leivo with Ting et al to include the above programmable digital signal processor in order to implement multiple wireless communication standards, services and applications as suggested by Ting et al (see paragraph 36).

Regarding claim 9, the combination of Molne, Farber and Leivo fails to disclose a program for driving the programmable A/D converter or programmable D/A converter is stored in the memory.

In a similar field of endeavor, Ting et al disclose HAL drivers like ADC Driver and DAC driver that are downloaded into specified hardware devices (see paragraph 54), which reads on the claimed, "a program for driving the programmable A/D converter or programmable D/A converter is stored in the memory."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Molne, Farber and Leivo with Ting et al to include the above program for driving the programmable digital A/D converter or programmable D/A converter stored in memory in order to implement multiple wireless communication standards, services and applications as suggested by Ting et al (see paragraph 36).

Regarding claim 10, the combination of Molne, Farber and Leivo fails to disclose a program for driving the programmable digital signal processor is stored in the memory.

In a similar field of endeavor, Ting et al disclose HAL drivers like ADC Driver and DAC driver that are downloaded into specified hardware devices (see paragraph 54), which reads on the claimed, "a program for driving the programmable digital signal processor is stored in the memory."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Molne, Farber and Leivo with Ting et al to include the above program for driving the programmable digital signal processor is stored in the memory in order to implement multiple wireless communication standards, services and applications as suggested by Ting et al (see paragraph 36).

Regarding claim 14, the combination of Molne, Farber and Leivo fails to disclose the step of configuring further comprises selecting and executing stored software modules for driving generic radio hardware according to the configuration information.

In a similar field of endeavor, Ting et al disclose a FPGA is used to supply the flexibility to re-configure hardware for a usage of interest (see paragraph 37), which reads on the claimed, "the step of reconfiguring further comprises selecting and executing stored software modules for driving generic radio hardware according to the configuration information."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Molne, Farber and Leivo with Ting et al to include the above programmable hardware in order to implement multiple wireless communication standards, services and applications as suggested by Ting et al (see paragraph 36).

Regarding claim 15, the combination of Molne, Farber and Leivo fails to disclose the generic radio hardware is selected from the group consisting of microprocessors, modulators/demodulators, and digital signal processors.

In a similar field of endeavor, Ting et al disclose a re-programmable kernel is a software task executed on a DSP (see paragraph 42), which reads on the claimed, "programmable digital signal processor.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Molne, Farber and Leivo with Ting et al to include the above programmable digital signal processor in order to implement multiple wireless communication standards, services and applications as suggested by Ting et al (see paragraph 36).

5.   Claims 19 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Molne (US 5,999,811) in view of Ting et al (US 2003/0050055A1) and further in

view of Leivo et al (US 6,782,080).

Regarding claim 19, Molne discloses multimode/multihyperband mobile stations

(see column 7, lines 40-64), which reads on the claimed, "software defined radio

comprising a RF section, a IF section and a baseband section." A preferred roaming

selection list is provided in the SIM of each mobile station. The preferred roaming

selection list specifies the selection sequence for the mobile station as it roams

throughout various geographic areas and may include, for example, AMPS and

PCS1900 modes (see column 7, lines 40-64 and figure 2), which reads on the claimed,

"a smartcard reader, wherein information retrieved by the smartcard reader designates

the respective programs." Molne fails to expressly disclose a programmable IF and

baseband section.

In a similar field of endeavor, Ting et al disclose a re-programmable kernel is a

software task executed on a DSP (see paragraph 42) and a A/D converter and a D/A

converter (see paragraph 39), which reads on the claimed, "the IF section and the

baseband sections are programmable, a plurality of software modules containing

programs for the IF section and the baseband section."

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to modify Molne with Ting et al to include the above programmable digital

signal processor and D/A and A/D converters in order to implement multiple wireless

communication standards, services and applications as suggested by Ting et al (see paragraph 36).

The combination of Molne and Ting does not specifically disclose the information is a function of service requirements, mission requirements and security status of a user.

Leivo teaches the information is a function of service requirements (see column 8, line 57 to column 9, line 6), mission requirements and security status of a user (see column 8, line 57 to column 9, line 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Leivo into the system of Molne and Ting in order to provide a method for real-time authentication or authorization of a user of a secured system is based on using two authentication channels an authentication device (see Leivo, Abstract).

Regarding claim 23, the combination of Molne and Ting et al discloses any combination of standards, such as GSM, DSC1800, PCS1900, AMPS, D-AMPS, NMT and ETACS can be made and provided with a preferred roaming selection list (see Molne column 9, lines 24-35), which reads on the claimed, "the plurality of communication schemes include a plurality of modulation/demodulation techniques."

Response to Arguments

6.   Applicant's arguments with respect to claims 1-5, 7-11, 14-19, 23 and 24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 9:30am-8:00pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nghi H. Ly